

XXVII. *Sketch of the Genus Pæcilocoris, belonging to the Hemipterous Family Scutelleridæ. By W. S. DALLAS, Esq.*

[Read 3d April, 1848.]

IN a paper in the third volume of the Transactions of the Entomological Society, at p. 84, Mr. White proposed the division of *Tectocoris*, Hahn, into two genera, retaining the name *Tectocoris* for that section which contains Hahn's type (*T. cyanipes*, Fab.), and proposing that of *Pæcilochroma*\* for the other, containing *Cimex Drurcæi*, Lin., and some allied species. The genus *Scutellera*, of Amyot and Serville, corresponds exactly with *Tectocoris* as above restricted, but those Entomologists have established no generic group to which the species forming the present genus can be referred.

As Mr. White, in the paper quoted above, did not fully characterize this genus, it may be as well here to give its distinctive characters at length.

Genus PÆCILOCORIS, (*Pæcilochroma*, White).

*Cimex*, Linn.; Drury; Fab. olim. *Tetyra*, Fab.; Burm. *Scutellera*, Guér.; Burm.; Germ.; H. Schæffer. *Tectocoris*, Hope.  
*Pachycoris*, H. Schæffer.

*Body* ovate, convex. *Head* (Pl. XIII. fig. *a*) rather large, broad, the lateral margins sinuated before the eyes. *Antennæ* (fig. *a*) about half the length of the body, of five joints; basal joint short, robust; second, shorter and thinnest; third, fourth and fifth, each as long as, or longer than the two basal united, nearly equal, compressed, broad, and furrowed longitudinally on the sides. *Rostrum* generally passing the second segment of the abdomen, in some species extending nearly to its apex. *Scutellum* slightly truncated at the apex. *Abdomen* (fig. *b*) with a more or less distinct furrow beneath; the three penultimate segments in the male not bearing the dull space on each side which exists in *Tectocoris* (fig. *c*), and the anal plate, in the same sex, simple, consisting only of one piece, which has its extremity sinuated, and fringed with hairs.

\* As I have been informed, since this was read, that the generic name *Pæcilochroma*, applied to this genus by Mr. White, had been previously employed in *Lepidoptera*, I have, with that gentleman's concurrence, changed his name for that which stands at the head of this paper.

The species bear a striking resemblance, in the arrangement of their colours, to many of the species of *Coccinella*, being mostly yellow, orange or red, spotted with black or violet; they correspond also in their tendency to variation, the spots sometimes increasing in size, until, becoming confluent, they cover nearly the whole surface, sometimes disappearing partially, or even entirely, so that their proper position can only be determined from some slight difference in the surface of the parts which, in the normal state, would be darkly coloured. The difficulty of distinguishing the species is increased by the remarkable uniformity which exists in most of them, in the number and position of the spots on the scutellum; but we shall generally find that the underside of the body (though even here there is some tendency to variation) will present us with sufficient characters for this purpose, for it is seldom the case that the development of the dark colouring matter is increased on both surfaces of the same individual.

Sp. 1. *P. latus*, N. S. (Pl. XIII. fig. 4.)

*P. rotundato-ovatus*, flavus, rubro-nebulosus, capite, maculisque thoracis et scutelli nigro-violaceis; abdomine rufo, immaculato, ano concolori; pectore flavescenti, antice pallide rufo; pedibus nigro-violaceis, femoribus basi testaceis; rostro\* abdominis medium attingente. ♂, ♀.

Long. lin. 9—10.

Hab. in China.

In Mus. Brit.

Rounded-ovate, not very convex; above yellow, clouded with orange-red, thickly punctured. Head violet, shining, thickly and strongly punctured; eyes brown; ocelli red. Thorax thickly punctured, somewhat rugose, with the anterior angles, and two large spots on the disc, extending to the posterior margin, deep blue-violet. Scutellum thickly and finely punctured, slightly wrinkled transversely at the base; with a spot in each basal angle, a large, irregular, transverse patch in the centre of the base, and a transverse row of four spots, of which the two intermediate are by much the largest, across the disc, behind the middle, deep blue-violet; the surface around all the spots clouded with orange-red. Margins of elytra black. Abdomen beneath red, immaculate, thickly and finely punctured, and slightly pilose, with a strong central furrow at the base. Anal apparatus reddish. Breast thickly punctured, yellowish, variegated with blackish violet; the

\* I have only noticed the length of the rostrum in the characters of those species in which it exceeds the usual limits.

antepectus pale red, with a violet-black spot at the base of the anterior legs. Thighs testaceous, their apices, with the tibiæ and tarsi, shining violet-black. Head beneath yellowish in the centre, with its margins violet. Antennæ black, the two basal joints with a violet tinge. Rostrum testaceous, with the two last joints black, the apex attaining the base of the fourth segment of the abdomen.

The Museum specimens of this beautiful species, which, from its form, may be considered as the link uniting this genus with *Tectocoris*, have the five spots in the centre of the base of the scutellum confluent, forming the large patch which is seen at this part; in the normal state they would be arranged exactly as in *P. Druræi*. In this particular it agrees with *Tetyra Donovanii*, Burm.,\* (Nova Acta, &c. vol. xvi. p. 286, Tab. 41, fig. 1,) and also in the absence of the two subapical spots, and the length of the rostrum; but the difference in the form, and in the general colouring of the two insects, is too great to admit of the supposition of their identity.

Sp. 2. *P. interruptus*, Hope.

*P. rotundato-ovatus*, nigro-æneus; thorace margine postico, lineaque curva longitudinali utrinque, scutello linea submedia transversa interrupta, margineque apicali, coccineis; abdomine nigro-æneo, rubro-variegato, ano nigro; pectore toto, pedibusque nigris. ♂, ♀.

Long. lin. 7—9.

Hab. in Nepal.

In Mus. Brit.

*Tectocoris interrupta*, Hope, Cat. p. 14.

*Scutellera int.*, Germ. Z. vol. i. p. 134; H. Sch. vol. v. p. 73, pl. 172, fig. 531.

Broadly ovate, rather flat; above brassy black, thickly and finely punctured. Eyes pale brown; ocelli red. Prothorax with the posterior margin, and a curved longitudinal line on each side, within the lateral angles, bright red. Scutellum with a narrow transverse line on the disc near the middle, interrupted in the centre, and the apical margin, bright red; [margins of elytra brassy black;] margins of abdomen black, variegated with bright red. Abdomen beneath black, shining, slightly brassy, the bases of the second, third, fourth and fifth segments, in the middle, and a marginal spot on the junction of each segment, red. Anal apparatus black, margined with red in the female. Breast brassy black, thickly and finely punctured. Antennæ, rostrum and legs black.

\* This species approaches very closely to *P. Hardwickii*.

In a long series of this insect in the British Museum there are no indications of distinct spots; but it is probable that the anterior margin, and two spots on the disc of the prothorax, are black, and that the spots on the scutellum are arranged much as in *P. Hardwickii*, the interruption to the red band being evidently caused by the apex of the central basal spot of the scutellum, although it is certainly quite distinct from that species.

Sp. 3. *P. purpurascens*, Hope. (Pl. XIII. fig. 5.)

*P. ovatus*, violaceo nigroque variegatus; thorace maculis 4 parvis, scutelloque 5, coccineis; abdomine viridi-æneo, maculis 4 utrinque rubris, ano nigro-æneo; pectore toto, pedibusque nigro-violaceis. ♂, ♀.

Long lin. 8—9.

Hab. in Nepal.

In Mus. Brit.

*Tectocoris purpurascens*, Hope, Cat. p. 14.

*Scutellera purp.*, Germ. Z. vol. i. p. 135.

Ovate; above variegated with violet and black, thickly and strongly punctured. Head nearly smooth, shining, slightly wrinkled, and punctured at the base and apex; eyes and ocelli brown. Thorax with a small red spot in the centre of the anterior margin, a corresponding one on the posterior margin, and a small streak of the same colour on each side towards the lateral angles. Scutellum with a small transverse streak on each side before the middle, a smaller longitudinal one towards the apex, and an oblique one on each side of this, on the lateral margins, bright red. Margins of elytra violet-black. Abdomen beneath slightly wrinkled, shining brassy green, the margins violet, with an irregular transverse red streak on each side on the second, third, fourth and fifth segments. Anal apparatus brassy black. Breast violet and green, shining, finely punctured, with a dull black patch on the medi- and post-pectus. Legs violet-black. Head beneath violet and green, shining, punctured. Antennæ and rostrum black.

The spots (indicated by the strong violet tints on various parts of the surface) are arranged, normally, exactly as in *P. Druræi*, but the species appears to be quite distinct.

Sp. 4. *P. Druræi*, Lin. (Pl. XIII. fig. 6.)

*P. ovatus*, luteo-fulvus, vel rufus; capite, maculis 2 thoracis, maculisque 13 scutelli, plus minusve confluentibus, nigris; elytris nigris; abdomine rufescenti-fulvo, basi, stigmatibus,

maculaque ante apicem, nigris; ano rufescenti; pectore (marginibus antero-lateralibus rufis exceptis), pedibus, antennisque nigris. ♂, ♀.

Long. lin. 8—9.

Hab. in Indiis Orient.

In Mus. Brit., &c.

*Cimex Druræi*, Lin. Mant. Plant. 534; Drury, Ins. vol. i. p. 94, pl. 42, fig. 1; Fab. E. S. vol. iv. pp. 83, 13.

*Tetyra Druræi*, Fab. S. R. pp. 132, 17.

*Scutellera Dr.*, Germ. Z., vol. i. p. 135. (Burm. p. 396.)

(*Tectocoris Dr.*, Hope, Cat.) Stoll. Wanz. p. 114, fig. 267.

The normal condition of this species may be considered to exhibit the typical colouring of the genus; in it the spots on the scutellum are arranged,—five basal, of which the central one is somewhat triangular and rather short, the two intermediate smallest; two behind these, placed opposite the intermediate basal ones, a row of four across the disc, rather behind the middle, and two towards the apex. The seven spots at the base are frequently confluent, forming a large basal patch, with three large notches in its posterior margin (as in the variety figured by Drury); the row of spots across the disc are also often united to form a transverse band. The narrow basal segment of the abdomen, and generally the second segment also, are violet-black; the stigmata of the other segments are surrounded by spots of the same colour, which generally occupy the entire lateral margins of the segments, and thus form a black border to the abdomen; the terminal segment, except the posterior and lateral margins, is black.

In a specimen of this insect, in the Museum of the East India Company, the usual black spots on the thorax and scutellum are represented by whitish guttæ, whilst the black markings of the abdomen occupy more of the surface than usual.

Sp. 5. *P. obsoletus*, N. S.

*P. ovatus*, coccineus opacus, pallide violaceo-maculatus; thorace marginibus lateralibus et antico nitidis; elytris coccineis; abdomine coccineo, segmento primo, stigmatibus, maculaque magna segmenti ultimi, nigris; ano rubro; pectore (marginibus antero-lateralibus exceptis), pedibusque nigris, femoribus basi fusciscentibus. ♂.

Long. lin. 9.

Hab. Hong Kong.

In Mus. Brit.

Ovate, above bright velvety red, thickly punctured. Head and eyes black; ocelli reddish. Thorax with the anterior and lateral margins smooth, shining, rather coarsely and irregularly punctured; two indistinct yellowish patches within the anterior angles, and faint indications of two elongated violet spots on the disc. Scutellum slightly wrinkled transversely at the base, and with indications of eleven violet spots, placed five at the base, two behind these, and four in a transverse row across the middle; the apical portion orange, finely reticulated with red. Margins of elytra bright red, thickly and coarsely punctured. Abdomen red, shining, with a few scattered punctures, and a faint longitudinal furrow at the base; the basal segment pitchy black, a small spot round each of the stigmata, and a large crescent-shaped one on the terminal segment, black. Anal apparatus red. Breast violet-black, shining, finely and sparingly punctured, a dull space on each side of the medi- and post-pectus; the antero-lateral margins and the lateral angles red. Thighs brownish, slightly tinted with brassy, their apices, the tibiæ and tarsi, brassy black. Head beneath shining violet, punctured, yellowish at the base. Antennæ black, the three basal joints tinted with violet and brassy, the two apical covered with short greyish hairs. Rostrum pitchy.

This insect was recently sent from Hong Kong by John C. Bowring, Esq.; it is very nearly allied to the preceding, the spots being arranged in exactly the same manner; but the two sub-apical ones are wanting, whilst the red colour of the margins of the elytra, the colour of the legs, the peculiar texture of the margins of the thorax, and the clothing of the two last joints of the antennæ, seem to mark it as a distinct species.

Sp. 6. *P. pulcher*, White, MS. (Pl. XIII. fig. 7.)

*P. ovatus*, purpureus, thorace antice, marginibus lateralibus, lineaque centrali coccineis; scutello basi, fasciaque lata media violaceo-tinctis; abdomine coccineo, stigmatibus nigris; ano rufo; pectore (marginibus antero-lateralibus exceptis) pedibusque nigro-purpureis. ♂.

Long. lin. 9.

Hab. in Malabar.

In Mus. Brit.

Ovate, deep velvety purple, thickly and finely punctured. Head shining, strongly punctured, blackish at the base, and along the margins of the lobes; eyes brownish; ocelli reddish. Thorax broadly margined with red laterally and anteriorly, and with a narrow, central, longitudinal line of the same colour on the disc.

Scutellum deep purple, with the base (irregularly), a transverse band across the disc, before the middle, a narrow central line uniting these, and a small spot on each side of the latter, shining violet. The margins of the elytra brownish purple. Abdomen with a strong furrow at the base, bright red, with a violet reflection, smooth, shining, very finely and moderately punctured; a black spot round each of the stigmata, and a faint band of the same colour across the terminal segment. Anal plate red. Breast purple, variegated with violet and greenish tints, shining, thickly and finely punctured, the antero-lateral margins and lateral angles red. Thighs brassy purple; tibiæ shining violet; tarsi black. Head beneath violet and green, shining, strongly punctured; orange at the base. Antennæ (mutilated) shining violet. Rostrum brassy black, basal joint pale pinkish violet.

The spots in this beautiful species appear to be arranged as in *P. Drurcei*, except that the two subapical ones are wanting. The others can easily be traced in the violet tints of the base, and the broad band across the middle of the scutellum.

Sp. 7. *P. Childreni*, White.

*P. ovatus*, luteo-fulvus; capite, thorace antice maculisque 4 posticis, scutelloque maculis 11, nigris; abdomine, pectoreque toto, nigro-purpureis, illo lineis 4 transversis utrinque, fulvis; ano nigro; pedibus nigro-purpureis. ♂, ♀.

Long. lin. 9.

Hab. in Nepal.

In Mus. Brit., &c.

*Pæcilochroma Childreni*, White, Ent. Trans. vol. iii. p. 84, pl. 7, fig. 1.

The spots on the scutellum are placed,—three basal, of which the central one is large, triangular, and produced on each side at the base, in such a manner that it appears as though in the normal state there would be an additional spot on each side, as in *P. Drurcei*; two behind these, a row of four across the disc, rather behind the middle, and two subapical. It is rather singular, that all the three specimens with which I am acquainted have (as noticed by Mr. White, l. c. sup.) a strong impression across the disc of the scutellum, in front of the transverse row of spots, in two instances, certainly, *increased* since the death of the insect, but in the third apparently in the same condition as during its life. This character, if it be one, exists in no other species.

I have never seen any specimens with the spots confluent, but if such should occur, they would be easily distinguishable from *P.*

*Druræi* by the broad black anterior margin of the prothorax, and the black anal plates; from the following species, *P. Hardwickii*, by the margins of *all* the segments of the abdomen being violet-black; and from both, by the presence of four spots on the disc of the prothorax, and by the entire breast being violet-black. It is probable that, in the normal condition, the disc of the abdomen may be yellow or orange, margined with black, as in *P. Druræi*, for in one of the specimens in the British Museum there exists, in addition to the transverse lines on each side, a narrow longitudinal line in the centre, which crosses two or three of the segments.

Sp. 8. *P. Hardwickii*, Hope.\* (Pl. XIII. fig. 8.)

*P. ovatus*, luteo-fulvus vel sanguineus; thorace antice maculisque 2 nigris; scutello nigro-maculato vel variegato; abdomine rufo, basi, segmentis marginibus lateralibus, penultimo et terminali exceptis, segmento ultimo anoque, nigro-violaceis; pectore (marginibus antero-lateralibus exceptis) pedibusque nigro-violaceis. ♂, ♀.

Long. lin. 8—10.

Hab. in India.

In Mus. Brit., &c.

*Tectocoris Hardwickii*, et *affinis*, Hope, Cat. p. 13.

*Pachycoris Nepalensis*, H. Sch., Wanz. Bd. 4, p. 1, Tab. 109, fig. 339.

*Scutellera Hardwickii*, Germ. Z., vol. i. p. 135.

Ovate, convex, above yellowish-orange or red, opaque, rather thickly and finely punctured. Head black, thickly and strongly punctured; eyes and ocelli brownish. Thorax with the anterior portion, and two large spots on the disc, black. Scutellum slightly wrinkled transversely at the base; in the normal state with eleven black spots, placed, three at the base, of which the central one is large, elongated-triangular, a small round one on each side of the apex of this, a transverse row of four across the disc, behind the middle, the two intermediate of which are the largest, and two smaller towards the apex. These spots are generally either more or less confluent, or partially obliterated, forming numerous varieties, as noted below. Margins of the elytra pitchy black. Abdomen beneath orange-red, very faintly wrinkled, the basal segment entirely, the second, except the middle, the third and fourth on the lateral margins, the terminal segment, except its lateral margins,

\* The insect described by Burmeister (Nova Acta, &c., vol. xvi. p. 286), under the name of *Tetyra Donovanii*, very closely resembles this species, with which it may perhaps be identical; in this case Burmeister's name must supplant Hope's.



(and, in the male, its base,) and the anal apparatus, violet-black; the penultimate segment is entirely red. Breast black, tinted with violet, finely punctured; the lateral angles of the antepectus, and part of the antero-lateral margins, red. Legs violet-black. Antennæ and rostrum black.

This is one of the most variable species of this genus with which we are at present acquainted. Mr. Hope has described, as distinct species, the two following varieties, viz.

1. *Tect. Hardwickii*, Hope.

*Pachycoris Nepalensis*, H. Sch.; *Scutellera Hardwickii*, Germ.

In this the spots have become confluent, so that the general colour of the upper surface of the insect is black; the thorax is nearly covered by the two spots on the disc, which extend forwards to the black anterior margin, and posteriorly to the hinder margin; the five spots at the base of the scutellum are united, forming a large waved band across the base, from the centre of which the apex of the triangular basal spot projects, while the two intermediate spots of the transverse row are joined to one another, and to the two subapical ones, forming a large rounded lobate patch.

Between this and the normal state, and between the latter and the following variety, a good many intermediate forms exist.

2. *Tect. affinis*, Hope.

In this the two subbasal and the two subapical spots are wanting, all the other characters existing as in the normal condition of the species, although we sometimes find the two spots on the disc of the thorax exceedingly indistinct. The species however is easily distinguished, throughout all its varieties, from those most nearly allied to it, by the uniform red colour of the fifth segment of the abdomen.

Sp. 9. *P. dives*, Guérin.

*P. rufo-fulvus*; capite, thorace margine antico, maculis thoracis et scutelli, elytrorumque marginibus nigris; abdomine rufo, sulco longitudinali indistincto, stigmatibus nigris; rostro fere abdominis apicem attingente. ♂.

Long. lin.  $7\frac{1}{2}$ .

Hab. in Java.

In Mus. Brit.

*Scutellera dives*, Guérin, Ic. pl. 55, fig. 1.

Somewhat elongate-ovate, above orange, thickly and finely punctured. Head brassy-black, shining, punctured; eyes brown-

ish; ocelli reddish. Thorax with the anterior margin, a spot on each lateral angle, a submarginal line on each side, uniting these with the anterior margin, and two large spots on the disc, violet or brassy-black. Scutellum with thirteen violet-black spots, placed as in *P. Druræi*. Margins of the elytra violet-black. Beneath thickly and finely punctured. Abdomen with a slight central furrow, red, shining, with a slight violet tint; a violet-black spot on each of the stigmata. Anal plate red. Breast violet, shining, pale in the centre and at the insertion of the legs; the antero-lateral margins red. Legs brassy-violet, with the base of the thighs brownish testaceous. Head beneath violet. Rostrum reaching nearly to the apex of the abdomen, violet-black, with the edges of the basal joint, and the articulations of all the joints, testaceous. Antennæ violet-black, with the base of the first joint testaceous.

Guérin, in the letter-press to his "Iconographie du Règne Animal," states this to be only a variety of *P. Druræi*; his figure, however, differs sufficiently from that species to show at once that they are decidedly distinct; and the characters drawn from the extraordinary length of the rostrum, and the colouring of the underside, place them at a still greater distance.

Sp. 10. *P. longirostris*, N.S. (Pl. XIII. fig. 9.)

*P. luteo-fulvus*, capite, maculis thoracis et scutelli, elytrorumque marginibus, nigris; abdomine luteo-fulvo, sulco longitudinali centrali distincto, stigmatibus nigris; rostro fere abdominis apicem attingente. ♀.

Long. lin. 9.

Hab. in Java.

In Mus. Brit.

Ovate, somewhat elongated; above orange-yellow, very thickly and finely punctured. Head black, strongly punctured; eyes brown; ocelli reddish. Thorax very narrowly edged with black anteriorly, and with a black spot within each anterior angle. Scutellum with seven black spots, placed, three at the base, two intermediate, and a very small one on each side, near the middle of the lateral margins. Beneath very thickly and finely punctured. Abdomen with a strong central furrow, orange-yellow, shining, with a violet-black spot on each of the stigmata. Anal apparatus yellow. Breast violet, shining; the centre, the antero-lateral margins, and some transverse lines on the margins of the segments, yellow. Legs shining violet; thighs at the base, and

coxæ, brownish testaceous. Head beneath violet, strongly punctured, yellow at the base; the antenniferous tubercles yellowish. Rostrum very long, reaching nearly to the apex of the abdomen, brassy green, shining; the edges of the basal joint yellow. Antennæ (mutilated) violet-black.

The only specimen of this insect in the British Museum is evidently deficient in spots; the two spots in the anterior angles of the prothorax being the remains of a transverse band on that part; the spots on the disc of the thorax, and most probably six spots of the scutellum, being wanting. It is very nearly allied to *P. dives*, but appears to be distinct; it may possibly, however, turn out to be the female of that species.

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XXVIII. *Description of some Species of Geometridæ from South America, forming a new Genus.* By EDWARD DOUBLEDAY, Esq. F.L.S., F.Z.S., &c.

[Read May 1st, 1848.]

THE beautiful insects forming the genus I am about to characterize are natives of the mountainous regions of the tropical portions of South America. The only specimens I have seen of the species here described were brought home by Mr. Dyson from Venezuela, and by Mr. Bridges from Bolivia. The former traveller found the three first species in the lofty mountains of Caraccas, the latter collected the fourth and fifth species in the country of the Yurucam Indians, in the Andes of Bolivia. I have also seen one species from the mountainous parts of Brazil, and much regret not being able to lay before the Society a description of it. It belongs to the third section. Of the affinities of the genus I can say nothing. We know too little of the *Geometridæ* to venture upon that subject, yet perhaps I might safely suggest an alliance to the genera *Odezia*, *Torula* and *Psodos*, all more or less mountain genera. The analogy in form to some of the *Erycinidæ* cannot be overlooked.

Like the genera *Odezia*, *Torula* and *Psodos*, the *Erateinæ* are diurnal insects.

The first segment of the abdomen offers the same remarkable cavity which, on a former occasion, I mentioned to this Society as occurring in some of the *Glaucopidæ*, considering it to be analogous